2 July 1965

MEMORANDUM FOR: Assistant Director, Computer Services

THROUGH   : Chief, Plans Staff

SUBJECT   : Development Division Monthly Report
                 for June 1965

I. Activity Highlights

    A. CHIVE Project

        1. Phase II Documentation

            a. Vols. I, II, III, IV, and VI have been printed.

            b. Vol. V ("System Organization, Functions, and Procedures") Mats have been sent to Printing Services.

            c. Vol. VII ("DP System") Proofs have been received from the printer and the bound volumes are expected momentarily.

        2. OCR/CHIVE Indexing Experiment

            a. Experiment Analysis

            All queries levied against the experimental data base have been completed and, as appropriate, analyzed by OCR components and production analysts. The writing of the final report on the experiment is underway and will be completed in mid-July.

            b. Statistical Analysis

            For this analysis, the output data has been manipulated to form an M x N matrix, where "M" is equal to the number of tag types used in the CHIVE experiment and "N" is equal to the number of document types processed during the experiment. From this analysis of the

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matrix it will be possible to describe
statistically each specific document type
in terms of the specific index terms (tag
types) required for its indexing. Also,
it will be possible to describe statisti-
cally the frequency of occurrence of the
various tag types collectively or for the
various types of documents.

3. Phase II Report Evaluation

a. An outline to guide OCR Divisions in preparing
their comments on the CHIVE Phase II Report
has been developed by SAS/OCR and will be
distributed on 2 July. Five volumes of the
report were disseminated to the OCR Divisions
during the week of 21-25 June. Supplemental
distribution of Volumes I and II to DD/I and
DD/P components is planned for mid-July.

4. Implementation Tasks

a. Indexer Station Analysis

A new task started in June is the study of the
input transcription system to:

1. improve and speed up some aspects of the
indexing work--primarily the transcription
and reference lookup tasks, and

2. to further develop the specifications for
the page reader and its associated paper
forms.

Specific steps taken in performing this task
include the following:

1. Developed basic header forms for five
classes of documents to replace the
universal form used for the CHIVE test
input. Each form is tailored (on the basis
of statistical and other data) to specific
document series to simplify the transcription
effort.

2. Obtained tentative OCR/OCS agreement on [STAT] the elements of header data to be recorded for each document series. This involved consultations with [   ] of OCS/CHIVE, [   ] of OCR staff, and [STAT] [   ] of OCR/SR. Further discussions are planned.

3. Performed further study of alternate CHIVE page readers. This involved visiting CDC, Farrington, and a Farrington page reader user. Written reports of these visits and a comparative analysis and recommendation have been submitted.

4. Performed preliminary forms design for the Western Union and CDC readers. This effort required consultation with [   ] of Forms Control for assistance in preparing and printing initial forms.

5. Started the study of indexing reference lookup problems, i.e., what lookups are required, what is the division of effort between clerical and professional workers, and what lookup mechanisms are available.

6. Started initial testing of lookup devices. Time trials were held for China Gazeteer data sources in several forms. Microfilm and tab card equivalents of the same tool are currently being prepared for their time trials. [   ] in the CHIVE test [STAT] group is the test subject for these trials.

7. Started an investigation of what input processing and validity checking is to be done with the index data as it comes into the machine system, and what this will require in terms of machine time and storage.

b. File Conversion Tasks

The Intellofax file conversion task is currently under way. [   ] has been assigned as OCR [STAT] liaison to support this effort. The SR file conversion task has been tabled until the extent of SR participation is clarified.

c. **Program for Processing Optical Page Reader Input**

This short-term task calls for a program design effort in support of the Indexer Station task. The twofold purpose of the task is to determine the extent of error checking that can be performed by the computer and to test the suitability of various input formats. The first product is to be a logical flow diagram of the error checking and data conversion functions. Actual coding and testing will be performed after selection of the specific page reader.

d. **JACK-L Project**

During the past month progress was made toward the creation of a merged file of China place names. DIA's Field Post Number file was eliminated after it was determined that it contained no information on China place names. OCS completed arrangements with DIA for a copy of the China and Tibet portions

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Two of the four card files were merged and corrections were made in cross-referenced cards from both files which did not contain all pertinent data, e.g., coordinates and WAC numbers.

5. **CHIVE EDP Development**

a. A working paper has been prepared that describes the operational and functional requirements of the EDP System.

b. Analysis of the Command Language has begun. The desired goal is to simplify the statements and still preserve the functional capabilities outlined in the Phase II Report.

c. Work is continuing in the area of unconditional file maintenance. The system will provide for many different transactions which effect a single record in a target file. A logic diagram has been prepared for the case of sequentially processed files. In addition a standard format has been designed for internal transactions.

B. ALP Project

1. Delay in ALP System Delivery

At the ALP status meeting of 15 June 1965, IBM confirmed that they were unable to meet the system acceptance schedule because of software problems. Two alternatives were suggested:

a. Acceptance by the Agency of this system as scheduled, assuming lowered acceptance threshholds (40 words per second at 6 percent error rate rather than 55 words per second at 4 percent error rate for Steno; and 10 words per second rather than 20 words per second for MT).

b. Delay acceptance test by as much as two months (1-15 October 1965 rather than 1-15 August 1965). IBM is confident that they will be able to meet the contract specifications with this time extension.

The decision of the Agency was to accept alternative b. based on consideration that any further degradation to speed and quality would be intolerable, while a delay of up to two months would benefit the ALP training programs.

2. ALP Hardware

The core memory of the ALP 1401 was changed from 8K to 12K to accommodate heavier I/O programming requirements.

3. Steno Software

ALP Steno disk (ALP-1) was run on ALP hardware during week of 21 June. Throughput attained was 56 words per second--meeting the acceptance threshhold. Lexicography continues toward optimization of dictionary.

4. Russian Software

The "process word" programming effort has improved and is now considered to be adhering to the revised schedule. Accordingly, the parallel "bi-directional" effort has been suspended.

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5. **Stenograph Machines**

Ten modified machines which were sent to the manufacturer for correction with respect to specifications have been returned to the Agency. The remaining nine machines have been sent to the manufacturer for similar reworking.

6. **Steno Cassette Construction**

The Machine Division, OCR, has completed the construction of nine wooden cassettes for containing and transporting stenograph machine tapes between FDD (Key Building) and OCS (Hqtrs.).

7. **Stenotype Teaching Device**

The Agency (OCS/Dev/ALP) has obtained on indefinite loan a programmable stenotype teaching device from the Army Security Agency. This device was designed and built at NSA. A contract (supported by ORD) is under consideration to program the device with the objective of compressing the currently required ALP Stenotype training period.

C. **Briefings, Meetings, Miscellany**

1. On 8 June [   ] was present at a briefing STAT requested by the Executive Director/Comptroller, Mr. Kirkpatrick, in which [   ] (DDICO)   STAT presented the objectives, present status, implementation planning, and manning problems of CHIVE. STAT On 18 June a second meeting was held with Mr. Kirkpatrick to discuss resources needed for CHIVE and the possibilities of compressing the Phase III STAT STAT effort. Persons in attendance at the latter meeting included Messrs. [   ] (OCR); Dr. Wheelon [   ] (DD/S&T); [   ] STAT [   ] (DD/I); and Messrs. Clarke, [   ] and STAT STAT [   ] (OBPAM). [   ] stated it was OCR's intent STAT STAT to continue with the total design effort, including STAT parallel operations and testing, but to accelerate STAT a number of specific tasks, for example, implementation of the recommended Document Delivery System,

dictionary building, and resolution of the security issue. Identification of resources needed for the Phase III effort, together with a request for additional slots, should be completed by 6 July.

2. On 3 June representatives from GE briefed OCS and OCR personnel on the hardware system under development for MIT's Project MAC.

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3. A team of Agency staff employees headed by [   ] CHIVE Officer, and accompanied by two IBM employees went to San Jose and Los Gratos, Calif. to examine developments associated with IBM's CYPRESS system. This trip lasted two days, June 10, 11. During the afternoon of the second day the Agency team visited The Firemans Fund Insurance Company in San Francisco to see a demonstration of Recognition Equipment page reader. [   ] was the OCS representative STAT the team.

4. On 2 June [   ] briefed the Agency ADP STAT Committee on the status of Project ALP and Project CHIVE.

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5. On 2 June [   ] briefed Mr. Tracy Rumford, RAND Corp., on OCS development activities.

6. On 16 June Mr. Barrett of SDC briefed OCR and OCS personnel on the CIRC system in use at FTD.

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7. [   ] participated in the quarterly OCS STAT project review briefing for the DD/S&T on 17 June.

8. On 22 June [   ] of CIA, Mrs. Oberthaler of IBM and Mr. Bourne of SRI visited CDC in Rockville and Farrington Electronics in Springfield to attend demonstrations of the page readers developed by each company.

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9. CHIVE, ALP, and advanced work sponsored by the National Science Foundation were topics for discussion during a meeting between [   ] and Mr. R. See of N.S.F. on 24 June.

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10. [blank] of Dev. Div. and Mr. Bourne of SRI discussed Agency experience in the use of the STAT Farrington page reader with personnel of OC.

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11. [blank] briefed [blank] in addition to approximately nine members of the on-site IBM group on the Generalized Information System presently being developed by IBM.

12. Mr. Collins of Ampex briefed Agency personnel on the Videofile document delivery system. Messrs STAT [blank] of Dev. Div. attended.

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13. During June [blank] participated in a 15-Year STAT Intelligence Planning activity through specific contributions as directed by AD/CS.

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14. An ALP Status Meeting was held on 15 June and was STAT attended by [blank] Agency personnel (OCS,OCR) and IBM ALP representatives from Kingston and Yorktown Research.

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15. [blank] as chairman of the Working Group on Transliteration, Task Team III CODIB, conducted a group meeting 16 June.

16. On 21 June [blank] started four weeks study STAT of ALP software systems at Kingston and Yorktown Research.

17. A briefing on the WALNUT system was given to Agency employees on 10 June. [blank] attended from STAT Development Division.

II. PERSONNEL

A. Development Division

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1. [blank] terminated her employment with the Agency on 4 June.

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2. [blank] EOD 7 June. He is assigned to the CHIVE EDP Development activity. From 14 June through STAT 25 June, [blank] attended the IOC course.

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3. On 14 June [____] returned to Headquarters duty upon completing the Agency's six-week Mid-Career Executive Course.

B. OCR

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1. [____] who served on the CHIVE Indexing Experiment will be transferred to SR/OCR on 6 July.

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2. [____] who was also attached to the Experiment, will resign from the Agency 2 July to resume his higher education.

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3. [____] DD/OCR, will be transferred to SR as of 6 July. She will be trained on the China organization dictionary maintained by SR, and, after completion of this training, will participate in the CHIVE organization dictionary file-building task.

C. IBM

1. Personnel Currently Assigned to Project CHIVE

(Full Time)

Alper, B. H.
Flynn, N. J.
Hooper, R. S.
Luke, J. A.
Moore, P. A.
Murray, P. J.
Oberthaler, S. M.
Pittard, L. I.

(Part Time)

DiCostanzo, J. A.

2. Personnel Changes

a. R. J. Miles left the project during the past month. He was replaced by P. J. Murray, who was re-assigned to a full-time status.

b. L. I. Pittard requested to be transferred to Huntsville, Alabama, after her forthcoming marriage in mid-August.

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    c. During the past month, K. Miller and C.
Bontempo were given their final debriefing.

III. BUDGET AND FISCAL

    A. IBM/CHIVE Contract

    The total number of man-hours expended on CHIVE during
the month of June was 1,295.

    Expenditures to date on the current contract are approxi-
mately 26% of the total budget.

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Chief
Development Division

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Distribution:

Original -
    1 - Dev. Div.
    1 - Applications
    1 - Scientific
    1 - Operations
    1 - VMR File
    1 - DD File
    1 - Chrono

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